

Infrared Thermometer

PMIR15 pyleaudio.com

Intended Use

The product is battery-operated and serves for contact-free temperature measuring on objects or surfaces. A laser point serves as aiming device. The degree of emission can be modified for measuring different surfaces.

Diagnostic application for medical purposes is not admissible. Do not use any other source of energy.

Please also heed the additional safety instructions in each chapter of these instructions.

Any use other than that described above is not permitted. In addition, this involves other risks, such as e.g. eye injuries.

Safety Instructions and Hazard Warnings

An exclamation mark in a triangle indicates important information in these operating instructions.

Please read the operating instructions through completely before putting the device into operation.

They contain important information for correct operation.

The warranty will be rendered invalid for damage caused due to non-compliance with these operating instructions. We shall not be liable for any consequential damage.

We shall not accept liability for damage to property or personal injury caused by improper handling or non-compliance with the safety instructions. The warranty will lapse in these cases.

- For safety and licensing reasons (CE), unauthorized conversion and/or modification of the device is not permitted.
- Due to the principle-related inaccuracy of IR temperature measuring, the displayed and the „actual“ temperature may differ slightly. Therefore, this product may not be used for very exact temperature measuring (e.g. boiling or melting points, chemical reactions, etc.).

Do not expose the device to high temperatures, strong vibrations or a high level of humidity.

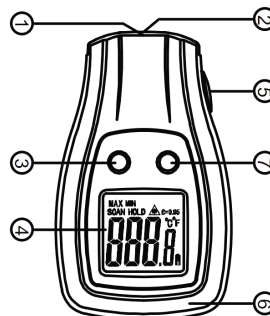
- Never look into the laser beam and never point it at persons or animals. Laser radiation may lead to eye or skin injuries.
- Do not point the laser beam on mirrors or other reflecting areas. The uncontrolledly deflected beam could hit persons or animals.
- Keep the device and the batteries out of the reach of children. They are not a toy.
- This product is equipped with a class 2 laser according to EN 60 825-1. Apart from a battery change, the device may not be opened. Setting or maintenance tasks must only be executed by a trained



Caution - if operation settings or procedures others than described here in these instructions are used, this could lead to a dangerous radiation exposition.

Description of Individual Parts

- 1 Output opening for the laser beam
- 2 IR-Temperature sensor
- 3 „SET“ button for mode setting
- 4 LC display (LCD = liquid crystal display)
- 5 „MEAS“ button for measuring
- 6 Hand Strap
- 7 „LASER/UP-DOWN“ button for changing the



Inserting/replacing the batteries

- _ Keep batteries out of the reach of children.

Do not leave the batteries lying around in the open; there is the risk of them being swallowed by children

or domestic animals. If swallowed, consult a doctor immediately.

Make sure that the polarity is correct when inserting the batteries.

Remove the batteries when the device is not being used for long periods of time.

Leaking or damaged batteries can lead to caustic burning of the skin. Therefore, use suitable protective gloves.

Batteries must not be short-circuited or thrown into fire. There is a risk of explosion!

Never take the batteries/ apart!

Always exchange the complete set of batteries; do not mix full batteries with empty/half-empty batteries. Never use batteries and accumulators together.

- Open the battery compartment on the back of the IR thermometer by sliding it in the direction of the arrow.
- Insert two micro-batteries (AAA) in the battery compartment observing the correct polarity. You will find the corresponding illustration in the battery compartment.
- Close the battery compartment in reverse order.
- If the battery icon appears on the display, exchange the batteries immediately to prevent false measuring results.

Initial operation

Operating principle

IR thermometers measure the surface temperatures of objects. The device's sensor measures the emitted, reflected and penetrated

heat radiation of the object and converts this information into a temperature value.

Measuring temperatures

Direct the opening of the IR sensor onto the object or surface to be measured and press „MEAS“ (5).

As long as the button is kept depressed, the temperature is measured and displayed (the display shows „SCAN“). The last measured value is displayed on the LC display (the display shows „HOLD“).

The IR thermometer shuts off automatically after approx. 12 seconds. Make sure that the surface to be measured is larger than the measuring spot. The ratio of the distance to spot ratio (D/S) is 6:1 with this IR thermometer. This means, that with a measuring distance of 60 cm, the measuring spot has a diameter of approx. 10 cm.

For exact measuring, the measuring object should be at least twice as large as the measuring spot (hold the IR thermometer closer to the measuring object, if applicable).

The temperature displayed by the IR thermometer is the average temperature of this measuring spot!

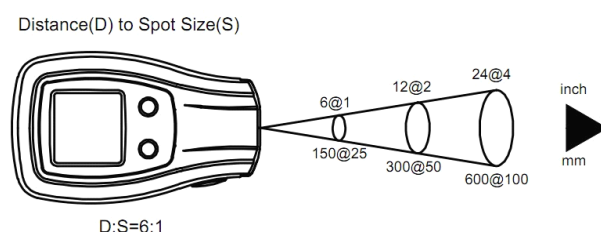
Activating the laser

A switchable laser enables the easier positioning of the measuring spot. Make sure that the laser point is approx. 16 mm away

from the center of the measuring spot (see sketch).

Turn the IR thermometer on (button „MEAS“) and briefly press the button „LASER“ (6). A small laser icon appears on the display

(triangle with a sun icon). Now the laser is activated automatically during measuring. To turn the laser off, press the button „LASER“ (6) again and the laser icon on the display disappears again.



Setting the measuring functions

The IR thermometer HT-280H can perform different measuring functions.

To access setup mode, press the button „SET“ when the thermometer is turned on (button „MEAS“).

The „SET“ button takes you to the next respective menu point and the button „LASER“ changes the parameters. The active function is displayed on the display.

Menu sequence:

MAX/MIN: Display of the minimum or maximum value. (MAX / MIN / Off = no icon).

Switching the temperature unit from Celsius (°C) to Fahrenheit (°F) and vice-versa.

Increasing the degree of emission „E“ (max. 1.00)

Decreasing the degree of emission „E“ (min. 0.10)

Setting for permanent measuring (lock icon).

OFF = Measuring only takes place when the measuring button is depressed

ON = Permanent measuring is activated, the device does not switch off after 12 s. To deactivate this mode, press the button „Laser“. The castle icon goes off.

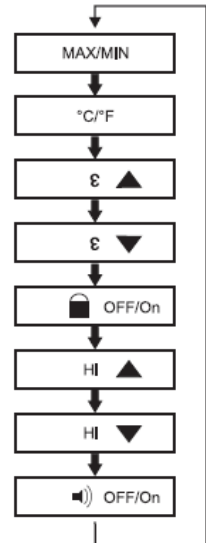
Raising the alarm level

Lowering the alarm level

Activating the temperature alarm.

OFF

ON = The measuring device emits a warning sound when exceeding the previously set alarm level.



Tips and information

- The emission degree describes the energy emission characteristics of a material. The higher this value is, the more radiation

a material may emit (thermal radiation). Many materials have a value that is close to the preset value „0.95“ of the IR thermometer.

Metallic shiny surfaces have a lesser degree of emission than matte black surfaces.

Therefore, the degree of emission must be preset accordingly.

In this case, attaching an adhesive strip (or lacquer with matte black paint, if possible), helps to be able to measure with the common emission degree of 0.95.

- Measuring through a glass pane is not possible, instead, the temperature of the glass pane is displayed.

Maintenance and Cleaning

Periodically check the technical safety of the device.

It can be assumed that risk-free operation is no longer possible if:

- there is visible damage to the appliance or

- the device has been stored under unfavourable conditions for a longer period of time

Periodically clean the surface of the IR sensor with a clean, soft brush and a vacuum cleaner. The outside of the appliance should be cleaned with a clean dry cloth or brush only. Do not use abrasive or chemical cleaning agents which could damage the housing or impair operation.

Never try to open the housing, apart from the battery compartment.

Disposal of spent Accumulators/Batteries

The end user is legally obliged (**German battery law**) to return all used batteries. **Disposal in household waste is prohibited.**

Batteries and accumulators containing hazardous substances are marked with the shown symbols indicating that they must not be disposed of in the household waste. The heavy metals concerned are: **Cd**

= cadmium, **Hg** = mercury, **Pb** = lead. You can return flat batteries/rechargeable batteries free of charge to the collection points in your community, our branches or anywhere else where batteries or rechargeable batteries are sold.

You will thus carry out your legal obligations and contribute to the protection of our environment.

Disposal

Old electronic devices are valuable materials. When the device has become unusable, dispose of it in accordance with the current statutory regulations at your communal collection points. Disposing of flat batteries/accumulators in the household waste is prohibited!

Technical Data

Operating voltage: 3 VDC (2x micro-batteries AAA)

Automatic switch-off: approximately 12 seconds

Laser: <1mW, red

display: 3.5-digit, LCD

Weight: approx. 76g

Dimensions (LxWxH).....: 94 mm x 51 mm x 25 mm

Measuring data

Measuring range: -50°C to +280 °C

Display resolution.....: 0.1°C

Measuring accuracy (at 18°C to 28°C): $\pm 2.5\%$ or $\pm 2^\circ\text{C}$

Degree of emission: 0.10 to 1.00, digitally adjustable

Ratio distance/spot.....: 6:1

Alarm range: -35°C to +228°C

Ambient conditions

Working temperature range: 0°C to 50 °C

Relative air humidity: <80% (non-condensing)